

Please substitute the following claim 19 for the pending claim 19:

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19. (Once amended) The package of claim 18, wherein said surface of said cavity shaped portion is plated with solder that allows said stiffener to be surface mounted to at least one soldering pad on the PCB.

Please add the following new claims 63-79:

63. A ball grid array (BGA) package, comprising:
a stiffener that has a first surface and a second surface;
wherein said second surface of said stiffener is configured to attach to a substrate of the BGA package; and
wherein said stiffener has a cavity-shaped portion that is configured to protrude through a window-shaped opening in the substrate, thereby exposing a portion of said second surface of said stiffener when said second surface of said stiffener is attached to the substrate.

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64. The BGA package of claim 63, wherein said exposed portion of said second surface of said stiffener is configured to be coupled to a printed circuit board (PCB).

65. The package of claim 63, wherein said stiffener is coupled to a first potential.

66. The package of claim 63, wherein said package further comprises:
an integrated circuit (IC) die that is mounted to said first surface of said stiffener.

67. The package of claim 66, wherein said IC die is mounted to said first surface of said stiffener in said cavity-shaped portion of said stiffener.

68. The package of claim 66, wherein said IC die has a surface that includes a ground signal pad, wherein said package further comprises:

a wire bond that couples said ground signal pad to said first surface of said stiffener.

69. The package of claim 66, wherein said IC die has a surface that includes a power signal pad, wherein said package further comprises:

a wire bond that couples said power signal pad to said first surface of said stiffener.

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70. A ball grid array (BGA) package, comprising:

a substrate that has a window-shaped opening; and

a stiffener that has a first surface and a second surface, wherein said second surface of said stiffener is attached to said substrate; and

wherein said stiffener has a cavity-shaped portion that protrudes through said window-shaped opening, thereby exposing a portion of said second surface of said stiffener.

71. The BGA package of claim 70, wherein said exposed portion of said second surface of said stiffener is configured to be coupled to a printed circuit board (PCB).

72. The package of claim 70, wherein said stiffener is coupled to a first potential.

73. The package of claim 70, wherein said package further comprises:
an integrated circuit (IC) die that is mounted to said first surface of said stiffener.

74. The package of claim 73, wherein said IC die is mounted to said first surface of
said stiffener in said cavity-shaped portion of said stiffener.

75. The package of claim 73, wherein said IC die has a surface that includes a ground
signal pad, wherein said package further comprises:
a wire bond that couples said ground signal pad to said first surface of said stiffener.

76. The package of claim 73, wherein said IC die has a surface that includes a power
signal pad, wherein said package further comprises:
a wire bond that couples said power signal pad to said first surface of said stiffener.

cont.

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77. A stiffener for use in a ball grid array (BGA) package, comprising:
a first surface that is configured to mount an integrated circuit die; and
a second surface that is configured to attach to a BGA package substrate; and
a cavity-shaped portion that is configured to protrude through a window-shaped opening
in the BGA package substrate when attached, to expose a portion of said second surface.

78. The stiffener of claim 77, wherein a portion of said second surface is plated to
facilitate attachment to a printed circuit board (PCB).

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79. The stiffener of claim 78, wherein said portion of said second surface is plated with a metal that comprises a solder material.

Election

In response to the Restriction Requirement listing species 1-11, Applicants elect without traverse to prosecute the invention relating to species 4, which is read on by claims 14, 18-22, and claim 60. Furthermore, new claims 63-79 are added by amendment above, which also read on the invention relating to species 4. This election of species 4, with related claims 14, 18-22, 60, and 63-79, is made without prejudice to or disclaimer of the other claims or inventions disclosed. Applicants reserve the right to file one or more divisional applications directed to non-elected inventions should the restriction requirement be made final.